EXAMPLES OF THE INPUT AND OUTPUT FOR THE WSDU*WATER.WET AND WSDU*WATER.WET-INLONG PROGRAMS

BY

RICHARD L. DADDOW

and

OWEN R. WILLIAMS

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WATERSHED SYSTEMS DEVELOPMENT GROUP

3825 EAST MULBERRY STREET

FORT COLLINS, COLORADO 80524

Table of Contents

1.0 INTRODUCTION

The purpose of this Report is to familiarize first-time users of the WSDU*WATER.WET and WSDU*WATER.WET-INLONG programs (hereafter referred to as WET and WET-INLONG) with the input and output procedure for these two programs. The examples presented in this report were selected to show some of the various input and output capabilities available in both programs. These examples also illustrate the option of reviewing the input and output before actually executing the programs. This report is intended to be used as a supplement to WSDG Report Series, WSDG-AD-00007, "WSDU*WATER.WET: THE COMPUTERIZED VERSION OF CHAPTER III - HYDROLOGY - OF THE WRENSS HANDBOOK" by Owen R. Williams and Richard L. Daddow, 1984, USDA Forest Service, Watershed Systems Development Group, which contains details needed to execute the WET and WET-INLONG programs. Additional information about these two programs may be obtained by using the WSDG Userguide Program residing at the Fort Collins Computer Center. To initiate this program, issue the following command at a demand terminal,

@XQT WSDU*WSDG.USERGUIDE .

2.0 EXAMPLES OF INPUT AND OUTPUT FOR THE WET PROGRAM

Example 1 shows the complete WET input data and output for an analysis of a watershed in snow-dominated Hydrologic Region 4. There are two analyses requested by this set of input data. The first represents "existing" or baseline conditions and the second represents prediction of "proposed" conditions. Examples 2 and 3 illustrate WET analyses for watersheds in rain-dominated Hydrologic Regions 5 and 2 respectively. In each case, the input data is presented followed by the output from WET. Example 2 presents a comparison of baseline and proposed conditions and incorporates a user-supplied flow duration curve through the use of DISTRIBUTION cards. Example 3 demonstrates the use of FD CURVE and CHANGE cards in evaluating proposed silvicultural changes on a site-specific flow duration curve and on streamflows at specific dates.

In order to reduce to page-size dimensions, the WET output in these examples was changed slightly (i.e., in terms of spacing and use of abbreviations) from what a user would normally receive as printed output from a high-speed computer printer. In addition, the WET output bordered by top and bottom double-dashed lines actually represents one page of printed output from a high-speed computer printer.

2.1 EXAMPLE 1

In this example, James Creek watershed, which comprises 1901 acres, is analyzed twice. The first watershed analysis simulates the baseline or unimpacted condition. In this instance, each of the three prescriptions (here subwatersheds) has one state. The user could have utilized more than one state had there been significant differences in vegetative cover density but such refinement was not required in this example. Each prescription differs on the basis of aspect, baseline cover density, and area.

The second watershed analysis simulates a proposed condition. The same three prescriptions are found but this time each has three states. Since snow redistribution is expected, each of the states has been identified as being in either an impacted/clearcut (deposition area), forest impacted (depletion area), or forest unimpacted condition. It should be noted that the user felt the depletion area would equal the deposition area (a useful assumption) hence the areas defined for impacted and forest impacted are equal. Furthermore, the user decided to utilize the mass balance approach within WET and defaulted to the program's snow retention coefficient values.

In both simulations, the user utilized the watershed precipitation values for the first prescription (Subdrainage I) and provided values for the next two (Subdrainages II and III). The user also defaulted to the evapotranspiration values of WRENSS, incorporated within the program, for the watershed and both of the prescriptions for which precipitation was supplied.

A listing of the input data and the resultant WET output for this example may be obtained by submitting the following commands.

```
@PRT,S WSDU*SAM.WETDATA4A
@XQT WSDU*WATER.WET
@ADD WSDU*SAM.WETDATA4A
```

EXAMPLE 1 - INPUT

```
Col 5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
WRENSSANALYSIS EXAMPLE FOR REGION 4 - SNOW       2 2
WATERSHED JAMES CREEK - BASELINE          4 21901.0 2 3 2 10 01   00
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
PRESCRIPTIONOSUBDRAINAGE I   850.031  .25   .0    .0 70.0                3.0 12
STATE FORESTED        1  .25    .0 850.0    .0 3 2    .0 1.00
PRESCRIPTION1SUBDRAINAGE II  463.011  .22   .0    .0 70.0                3.0 12
PRECIPITATION   9.6 11.6  8.2   .0    .00    .00    .00    .00
STATE FORESTED        1  .22    .0 463.0    .0 3 2    .0 1.00
PRESCRIPTION1SUBDRAINAGE III 588.071  .18   .0    .0 70.0                3.0 12
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
STATE FORESTED        1  .18    .0 588.0    .0 3 2    .0 1.00
WATERSHED JAMES CREEK - PROPOSED          4 21901.0 1 3 1 20 01   00
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
PRESCRIPTIONOSUBDRAINAGE I   850.031  .25   .0    .0 70.0                3.0 31
STATE UNIMPACTED      1  .25    .0 110.0    .0 3 2    .0 1.00
STATE FOR. IMPACTED   1  .25    .0 370.0    .0 2 2    .0 -1.0
STATE CLEARCUT        1  .00    .0 370.0    .0 1 1 280.0 -1.0
PRESCRIPTION1SUBDRAINAGE II  463.011  .22   .0    .0 70.0                3.0 31
PRECIPITATION   9.6 11.6  8.2   .0    .00    .00    .00    .00
STATE UNIMPACTED      1  .22    .0  85.0    .0 3 2    .0 1.00
STATE FOR. IMPACTED   1  .22    .0 189.0    .0 2 2    .0 -1.0
STATE CLEARCUT        1  .00    .0 189.0    .0 1 1 280.0 -1.0
PRESCRIPTION1SUBDRAINAGE III 588.071  .18   .0    .0 70.0                3.0 31
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
STATE UNIMPACTED      1  .18    .0 244.0    .0 3 2    .0 1.00
STATE FOR. IMPACTED   1  .18    .0 172.0    .0 2 2    .0 -1.0
STATE CLEARCUT        1  .00    .0 172.0    .0 1 1 280.0 -1.0
```

EXAMPLE 1 - OUTPUT

```
WSDU*WATER.WET PROGRAM

WATERSHED SYSTEMS DEVELOPMENT GROUP
FEBRUARY 1984


    THIS PROGRAM IS A COMPUTERIZED VERSION OF THE HYDROLOGY
PROCEDURE AS DESCRIBED IN THE HANDBOOK "AN APPROACH TO WATER
RESOURCES EVALUATION NON-POINT SILVICULTURE SOURCES" (WRENSS).
FOR A MORE DETAILED EXPLANATION OF THIS OUTPUT CONSULT THE
HYDROLOGY CHAPTER IN THE HANDBOOK.  THE USER OF THIS PROGRAM
SHOULD BE AWARE OF THE STRENGTHS, WEAKNESSES, AND LIMITATIONS
OF THE WATER YIELD ESTIMATION PROCEDURE.


************************************************************
*                                                          *
*          SEE THE WSDG USERGUIDE PROGRAM                  *
*                                                          *
*          FOR CHANGES AND UPDATES INVOLVED                *
*                                                          *
*          WITH THE EXECUTION OF THIS PROGRAM              *
*                                                          *
*          TO INITIATE THE USERGUIDE PROGRAM               *
*                                                          *
*          ENTER IN DEMAND: @XQT WSDU*WSDG.USERGUIDE       *
*                                                          *
************************************************************


WRENSS ANALYSIS IDENTIFICATION: EXAMPLE FOR REGION 4 - SNOW

NUMBER OF WATERSHEDS TO BE ANALYZED: 2

MEASUREMENT SYSTEM: ENGLISH
```

WATERSHED DATA FOR JAMES CREEK - BASELINE

HYDROLOGIC REGION: REGION 4, ROCKY MOUNTAIN INLAND/INTERMOUNTAIN
CONDITION: EXISTING

DOMINANT PRECIPITATION: SNOW
TOTAL WATERSHED AREA: 1901.0 ACRES

SNOW REDISTRIBUTION: NOT LIKELY
NUMBER OF PRESCRIPTIONS: 3

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY, FEBRUARY	8.00
SPRING	MARCH, APRIL, MAY, JUNE	11.00
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	7.80

PRESCRIPTION DATA FOR SUBDRAINAGE I

LOCATED IN WATERSHED: JAMES CREEK - BASELINE

TOTAL PRESCRIPTION AREA: 850.0 ACRES
SOIL IDENTIFICATION:

PRESCRIPTION ASPECT: EAST
AVERAGE SOIL DEPTH: 3.0 FEET

CANOPY OPENING IN PRESCRIPTION: NO
AVERAGE TREE HEIGHT: 70.0 FEET

BASELINE COVER DENSITY: .25 PERCENT AS A DECIMAL
NUMBER OF SILVICULTURAL STATES: 1

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
FORESTED	UNIMPACTED	850.0	LODGEPOLE PINE	.0	.25	1.00

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE I WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA ACRES	AREA %PRE.	AREA %WSD.	RETEN.COEF. UNADJ	RETEN.COEF. ADJ	PRECIP.(IN) UNADJ	PRECIP.(IN) ADJ	BASAL AREA (FT2/A)	COVER DEN. (%)	COVER DEN. %CDMX	ET MOD COEF.	ET(INCHES) BASE.	ET(INCHES) ADJ
WINTER	UNIMPACTED	FORESTED	850.0	1.000	.447	1.00	1.00	8.00	8.00	.0	.25	1.00	1.00	1.80	1.80
SPRING	UNIMPACTED	FORESTED	850.0	1.000	.447	1.00	1.00	11.00	11.00	.0	.25	1.00	1.00	7.00	7.00
SUMMER /FALL	UNIMPACTED	FORESTED	850.0	1.000	.447	1.00	1.00	7.80	7.80	.0	.25	1.00	1.00	9.01	9.01

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE I WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION STATE	WEIGHTED EVAPOTRANSPIRATION PRESCRIPT	WEIGHTED EVAPOTRANSPIRATION WATERSHED	WATER AVAILABLE FOR STREAMFLOW STATE	WATER AVAILABLE FOR STREAMFLOW PRESCRIPT	WATER AVAILABLE FOR STREAMFLOW WATERSHED
WINTER	UNIMPACTED	FORESTED	8.00	1.80	1.80	.80	6.20	6.20	2.77
SPRING	UNIMPACTED	FORESTED	11.00	7.00	7.00	3.13	4.00	4.00	1.79
SUMMER /FALL	UNIMPACTED	FORESTED	7.80	9.01	9.01	4.03	-1.21*	-1.21*	-.54*
ANNUAL TOTAL					17.81	7.96		8.99	4.02

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT NEGATIVE FLOW

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE I

WATERSHED: JAMES CREEK - BASELINE

PRESCRIPTION ASPECT: EAST

ENERGY-ASPECT CLASSIFICATION: MEDIUM

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	8.99	-
OPEN	.00	-
TOTAL	8.99	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS			FLOW FROM OPEN AREAS			INTERPOLTD. FLOW		TOTAL FLOW	
	(%/100)	(IN)	(CFS)	(%/100)	(IN)	(CFS)	(IN)	(CFS)	(IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0075	.00	.00	.00	.00	.00	.00
4	.0000	.00	.00	.0200	.00	.00	.00	.00	.00	.00
5	.0000	.00	.00	.0350	.00	.00	.00	.00	.00	.00
6	.0000	.00	.00	.0550	.00	.00	.00	.00	.00	.00
7	.0050	.04	.27	.0750	.00	.00	.00	.00	.04	.27
8	.0150	.13	.80	.0950	.00	.00	.00	.00	.13	.80
9	.0300	.27	1.61	.1350	.00	.00	.00	.00	.27	1.61
10	.0450	.40	2.41	.1550	.00	.00	.00	.00	.40	2.41
11	.0650	.58	3.49	.1600	.00	.00	.00	.00	.58	3.49
12	.1000	.90	5.36	.1300	.00	.00	.00	.00	.90	5.36
13	.1300	1.17	6.97	.0825	.00	.00	.00	.00	1.17	6.97
14	.1375	1.24	7.37	.0325	.00	.00	.00	.00	1.24	7.37
15	.1400	1.26	7.51	.0125	.00	.00	.00	.00	1.26	7.51
16	.1350	1.21	7.24	.0050	.00	.00	.00	.00	1.21	7.24
17	.1150	1.03	6.17	.0000	.00	.00	.00	.00	1.03	6.17
18	.0600	.54	3.22	.0000	.00	.00	.00	.00	.54	3.22
19	.0200	.18	1.07	.0000	.00	.00	.00	.00	.18	1.07
20	.0025	.02	.13	.0000	.00	.00	.00	.00	.02	.13
21	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
22	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
23	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

PRESCRIPTION DATA FOR SUBDRAINAGE II

LOCATED IN WATERSHED: JAMES CREEK - BASELINE

TOTAL PRESCRIPTION AREA: 463.0 ACRES

PRESCRIPTION ASPECT: NORTH

CANOPY OPENING IN PRESCRIPTION: NO

BASELINE COVER DENSITY: .22 PERCENT AS A DECIMAL

SOIL IDENTIFICATION:

AVERAGE SOIL DEPTH: 3.0 FEET

AVERAGE TREE HEIGHT: 70.0 FEET

NUMBER OF SILVICULTURAL STATES: 1

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
FORESTED	UNIMPACTED	463.0	LODGEPOLE PINE	.0	.22	1.00

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY, FEBRUARY	9.60
SPRING	MARCH, APRIL, MAY, JUNE	11.60
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	8.20

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE II WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA ACRES	AREA %PRE.	AREA %WSD.	RETEN COEF UNADJ	RETEN COEF ADJ	PRECIP(IN) UNADJ	PRECIP(IN) ADJ	BASAL AREA (FT2/A)	COVER DEN. (%)	COVER DEN. %CDMX	ET MOD COEF.	ET(INCHES) BASE.	ET(INCHES) ADJ
WINTER	UNIMPACTED	FORESTED	463.0	1.000	.244	1.00	1.00	9.60	9.60	.0	.22	1.00	1.00	1.38	1.38
SPRING	UNIMPACTED	FORESTED	463.0	1.000	.244	1.00	1.00	11.60	11.60	.0	.22	1.00	1.00	6.00	6.00
SUMMER /FALL	UNIMPACTED	FORESTED	463.0	1.000	.244	1.00	1.00	8.30	8.20	.0	.22	1.00	1.00	9.06	9.06

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE II WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION STATE	WEIGHTED EVAPOTRANSPIRATION PRESCRIPT	WEIGHTED EVAPOTRANSPIRATION WATERSHED	WATER AVAILABLE FOR STREAMFLOW STATE	WATER AVAILABLE FOR STREAMFLOW PRESCRIPT	WATER AVAILABLE FOR STREAMFLOW WATERSHED
WINTER	UNIMPACTED	FORESTED	9.60	1.38	1.38	.34	8.22	8.22	2.00
SPRING	UNIMPACTED	FORESTED	11.60	6.00	6.00	1.46	5.60	5.60	1.36
SUMMER /FALL	UNIMPACTED	FORESTED	8.20	9.06	9.06	2.21	-.86*	-.86*	-.21*
ANNUAL TOTAL					16.44	4.00		12.96	3.16

* NEGATIVE VALUES INDICATE STTORAGE DEPLETION NOT NEGATIVE FLOW

EXAMPLE 1 - OUTPUT

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE II

WATERSHED: JAMES CREEK - BASELINE

PRESCRIPTION ASPECT: NORTH

ENERGY-ASPECT CLASSIFICATION: LOW

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	12.96	-
OPEN	.00	-
TOTAL	12.96	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS (%/100)	(IN)	(CFS)	FLOW FROM OPEN AREAS (%/100)	(IN)	(CFS)	INTERPOLTD. FLOW (IN)	(CFS)	TOTAL FLOW (IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
4	.0000	.00	.00	.0025	.00	.00	.00	.00	.00	.00
5	.0000	.00	.00	.0100	.00	.00	.00	.00	.00	.00
6	.0000	.00	.00	.0200	.00	.00	.00	.00	.00	.00
7	.0000	.00	.00	.0325	.00	.00	.00	.00	.00	.00
8	.0025	.03	.11	.0525	.00	.00	.00	.00	.03	.11
9	.0100	.13	.42	.0950	.00	.00	.00	.00	.13	.42
10	.0200	.26	.84	.1425	.00	.00	.00	.00	.26	.84
11	.0475	.62	2.00	.1550	.00	.00	.00	.00	.62	2.00
12	.0725	.94	3.05	.1550	.00	.00	.00	.00	.94	3.05
13	.0925	1.20	3.89	.1400	.00	.00	.00	.00	1.20	3.89
14	.1050	1.36	4.42	.0800	.00	.00	.00	.00	1.36	4.42
15	.1125	1.46	4.74	.0500	.00	.00	.00	.00	1.46	4.74
16	.1150	1.49	4.84	.0325	.00	.00	.00	.00	1.49	4.84
17	.1150	1.49	4.84	.0200	.00	.00	.00	.00	1.49	4.84
18	.1125	1.46	4.74	.0100	.00	.00	.00	.00	1.46	4.74
19	.0975	1.26	4.11	.0025	.00	.00	.00	.00	1.26	4.11
20	.0550	.71	2.32	.0000	.00	.00	.00	.00	.71	2.32
21	.0250	.32	1.05	.0000	.00	.00	.00	.00	.32	1.05
22	.0125	.16	.53	.0000	.00	.00	.00	.00	.16	.53
23	.0050	.06	.21	.0000	.00	.00	.00	.00	.06	.21
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

PRESCRIPTION DATA FOR SUBDRAINAGE III

LOCATED IN WATERSHED: JAMES CREEK - BASELINE

TOTAL PRESCRIPTION AREA: 588.0 ACRES

PRESCRIPTION ASPECT: WEST

CANOPY OPENING IN PRESCRIPTION: NO

BASELINE COVER DENSITY: .18 PERCENT AS A DECIMAL

SOIL IDENTIFICATION:

AVERAGE SOIL DEPTH: 3.0 FEET

AVERAGE TREE HEIGHT: 70.0 FEET

NUMBER OF SILVICULTURAL STATES: 1

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
FORESTED	UNIMPACTED	588.0	LODGEPOLE PINE	.0	.18	1.00

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY, FEBRUARY	8.00
SPRING	MARCH, APRIL, MAY, JUNE	11.00
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	7.80

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE III WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA ACRES	AREA %PRE.	AREA %WSD.	RETEN.COEF. UNADJ	RETEN.COEF. ADJ	PRECIP.(IN) UNADJ	PRECIP.(IN) ADJ	BASAL AREA (FT2/A)	COVER DEN. (%)	COVER DEN. %CDMX	ET MOD COEF.	ET(INCHES) BASE.	ET(INCHES) ADJ
WINTER	UNIMPACTED	FORESTED	588.0	1.000	.309	1.00	1.00	8.00	8.00	.0	.18	1.00	1.00	1.80	1.80
SPRING	UNIMPACTED	FORESTED	588.0	1.000	.309	1.00	1.00	11.00	11.00	.0	.18	1.00	1.00	7.00	7.00
SUMMER /FALL	UNIMPACTED	FORESTED	588.0	1.000	.309	1.00	1.00	7.80	7.80	.0	.18	1.00	1.00	9.01	9.01

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE III WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION STATE	WEIGHTED EVAPOTRANSPIRATION PRESCRIPT	WEIGHTED EVAPOTRANSPIRATION WATERSHED	WATER AVAILABLE FOR STREAMFLOW STATE	WATER AVAILABLE FOR STREAMFLOW PRESCRIPT	WATER AVAILABLE FOR STREAMFLOW WATERSHED
WINTER	UNIMPACTED	FORESTED	8.00	1.80	1.80	.56	6.20	6.20	1.92
SPRING	UNIMPACTED	FORESTED	11.00	7.00	7.00	2.17	4.00	4.00	1.24
SUMMER /FALL	UNIMPACTED	FORESTED	7.80	9.01	9.01	2.79	-1.21*	-1.21*	-.37*
ANNUAL TOTAL					17.81	5.51		8.99	2.78

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT NEGATIVE FLOW

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE III

WATERSHED: JAMES CREEK - BASELINE

PRESCRIPTION ASPECT: WEST

ENERGY-ASPECT CLASSIFICATION: MEDIUM

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	8.99	-
OPEN	.00	-
TOTAL	8.99	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS (%/100)	(IN)	(CFS)	FLOW FROM OPEN AREAS (%/100)	(IN)	(CFS)	INTERPOLTD. FLOW (IN)	(CFS)	TOTAL FLOW (IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0075	.00	.00	.00	.00	.00	.00
4	.0000	.00	.00	.0200	.00	.00	.00	.00	.00	.00
5	.0000	.00	.00	.0350	.00	.00	.00	.00	.00	.00
6	.0000	.00	.00	.0550	.00	.00	.00	.00	.00	.00
7	.0050	.04	.19	.0750	.00	.00	.00	.00	.04	.19
8	.0150	.13	.56	.0950	.00	.00	.00	.00	.13	.56
9	.0300	.27	1.11	.1350	.00	.00	.00	.00	.27	1.11
10	.0450	.40	1.67	.1550	.00	.00	.00	.00	.40	1.67
11	.0650	.58	2.41	.1600	.00	.00	.00	.00	.58	2.41
12	.1000	.90	3.71	.1300	.00	.00	.00	.00	.90	3.71
13	.1300	1.17	4.82	.0825	.00	.00	.00	.00	1.17	4.82
14	.1375	1.24	5.10	.0325	.00	.00	.00	.00	1.24	5.10
15	.1400	1.26	5.19	.0125	.00	.00	.00	.00	1.26	5.19
16	.1350	1.21	5.01	.0050	.00	.00	.00	.00	1.21	5.01
17	.1150	1.03	4.27	.0000	.00	.00	.00	.00	1.03	4.27
18	.0600	.54	2.23	.0000	.00	.00	.00	.00	.54	2.23
19	.0200	.18	.74	.0000	.00	.00	.00	.00	.18	.74
20	.0025	.02	.09	.0000	.00	.00	.00	.00	.02	.09
21	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
22	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
23	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

WATERSHED WATER BALANCE SUMMARY

WATERSHED: JAMES CREEK - BASELINE CONDITION: EXISTING

PRESCRIPTION IDENTIFICATION	ANNUAL EVAPOTRANS (INCHES)	ANNUAL EVAPOTRANS WEIGHTED	ANNUAL STREAMFLOW (INCHES)	ANNUAL STREAMFLOW WEIGHTED
SUBDRAINAGE I	17.81	7.96	8.99	4.02
SUBDRAINAGE II	16.44	4.00	12.96	3.16
SUBDRAINAGE III	17.81	5.51	8.99	2.78
TOTAL		17.47		9.96

SIX DAY AVERAGE WATERSHED HYDROGRAPH

FOR

JAMES CREEK - BASELINE

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	9.96	-
OPEN	.00	-
TOTAL	9.96	-

6-DAY INTERVAL	FORESTED FLOW (IN)	FORESTED FLOW (CFS)	OPEN FLOW (IN)	OPEN FLOW (CFS)	INTERPOLTD. FLOW (IN)	INTERPOLTD. FLOW (CFS)	TOTAL FLOW (IN)	TOTAL FLOW (CFS)
1	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00
7	.03	.45	.00	.00	.00	.00	.03	.45
8	.11	1.47	.00	.00	.00	.00	.11	1.47
9	.24	3.14	.00	.00	.00	.00	.24	3.14
10	.37	4.92	.00	.00	.00	.00	.37	4.92
11	.59	7.90	.00	.00	.00	.00	.59	7.90
12	.91	12.12	.00	.00	.00	.00	.91	12.12
13	1.18	15.69	.00	.00	.00	.00	1.18	15.69
14	1.27	16.90	.00	.00	.00	.00	1.27	16.90
15	1.31	17.44	.00	.00	.00	.00	1.31	17.44
16	1.28	17.09	.00	.00	.00	.00	1.28	17.09
17	1.15	15.27	.00	.00	.00	.00	1.15	15.27
18	.76	10.18	.00	.00	.00	.00	.76	10.18
19	.44	5.92	.00	.00	.00	.00	.44	5.92
20	.19	2.54	.00	.00	.00	.00	.19	2.54
21	.08	1.05	.00	.00	.00	.00	.08	1.05
22	.04	.53	.00	.00	.00	.00	.04	.53
23	.02	.21	.00	.00	.00	.00	.02	.21
24	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
56	.00	.00	.00	.00	.00	.00	.00	.00
57	.00	.00	.00	.00	.00	.00	.00	.00
58	.00	.00	.00	.00	.00	.00	.00	.00
59	.00	.00	.00	.00	.00	.00	.00	.00
60	.00	.00	.00	.00	.00	.00	.00	.00
61	.00	.00	.00	.00	.00	.00	.00	.00

EXAMPLE 1 - OUTPUT

WATERSHED DATA FOR JAMES CREEK - PROPOSED

HYDROLOGIC REGION: REGION 4, ROCKY MOUNTAIN INLAND/INTERMOUNTAIN — CONDITION: PROPOSED - A

DOMINANT PRECIPITATION: SNOW — TOTAL WATERSHED AREA: 1901.0 ACRES

SNOW REDISTRIBUTION: LIKELY — NUMBER OF PRESCRIPTIONS: 3

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY, FEBRUARY	8.00
SPRING	MARCH, APRIL, MAY, JUNE	11.00
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	7.80

PRESCRIPTION DATA FOR SUBDRAINAGE I

LOCATED IN WATERSHED: JAMES CREEK - PROPOSED

TOTAL PRESCRIPTION AREA: 850.0 ACRES

PRESCRIPTION ASPECT: EAST

CANOPY OPENING IN PRESCRIPTION: YES

BASELINE COVER DENSITY: .25 PERCENT AS A DECIMAL

SOIL IDENTIFICATION:

AVERAGE SOIL DEPTH: 3.0 FEET

AVERAGE TREE HEIGHT: 70.0 FEET

NUMBER OF SILVICULTURAL STATES: 3

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
UNIMPACTED	UNIMPACTED	110.0	LODGEPOLE PINE	.0	.25	1.00
FOR. IMPACTED	FORESTED IMPACTED	370.0	LODGEPOLE PINE	.0	.25	-1.00*
CLEARCUT	IMPACTED	370.0	LODGEPOLE PINE	.0	.00	-1.00*

* NEGATIVE VALUES INDICATE UNSPECIFIED SNOW RETENTION COEFFICIENTS.

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE I WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA ACRES	AREA %PRE.	AREA %WSD.	RETEN.COEF. UNADJ	RETEN.COEF. ADJ	PRECIP.(IN) UNADJ	PRECIP.(IN) ADJ	BASAL AREA (FT2/A)	COVER DEN. (%)	COVER DEN. %CDMX	ET MOD COEF.	ET(INCHES) BASE.	ET(INCHES) ADJ
WINTER	UNIMPACTED	UNIMPACTED	110.0	.129	.058	1.00	1.00	8.00	8.00	.0	.25	1.00	1.00	1.80	1.80
WINTER	F.IMPACTED	F.IMPACTED	370.0	.435	.195	1.00	.73	8.00	5.80	.0	.25	1.00	1.00	1.80	1.80
WINTER	IMPACTED	CLEARCUT	370.0	.435	.195	1.27	1.27	8.00	10.20	.0	.00	.00	.60	1.80	1.08
SPRING	UNIMPACTED	UNIMPACTED	110.0	.129	.058	1.00	1.00	11.00	11.00	.0	.25	1.00	1.00	7.00	7.00
SPRING	F.IMPACTED	F.IMPACTED	370.0	.435	.195	1.00	.73	11.00	7.98	.0	.25	1.00	1.00	6.02	6.02
SPRING	IMPACTED	CLEARCUT	370.0	.435	.195	1.27	1.27	11.00	14.02	.0	.00	.00	1.08	7.00	7.52
SUM/FALL	UNIMPACTED	UNIMPACTED	110.0	.129	.058	1.00	1.00	7.80	7.80	.0	.25	1.00	1.00	9.01	9.01
SUM/FALL	F.IMPACTED	F.IMPACTED	370.0	.435	.195	1.00	1.00	7.80	7.80	.0	.25	1.00	1.00	9.01	9.01
SUM/FALL	IMPACTED	CLEARCUT	370.0	.435	.195	1.00	1.00	7.80	7.80	.0	.00	.00	.52	9.01	4.73

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE I WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION STATE	WEIGHTED EVAPOTRANSPIRATION PRESCRIPT	WEIGHTED EVAPOTRANSPIRATION WATERSHED	WATER AVAILABLE FOR STREAMFLOW STATE	WATER AVAILABLE FOR STREAMFLOW PRESCRIPT	WATER AVAILABLE FOR STREAMFLOW WATERSHED
WINTER	UNIMPACTED	UNIMPACTED	8.00	1.80	.23	.10	6.20	.80	.36
WINTER	F.IMPACTED	FOR.IMPACTED	5.80	1.80	.78	.35	4.00	1.74	.78
WINTER	IMPACTED	CLEARCUT	10.20	1.08	.47	.21	9.12	3.97	1.78
SPRING	UNIMPACTED	UNIMPACTED	11.00	7.00	.91	.41	4.00	.52	.23
SPRING	F.IMPACTED	FOR.IMPACTED	7.98	6.02	2.62	1.17	1.95	.85	.38
SPRING	IMPACTED	CLEARCUT	14.02	7.52	3.28	1.46	6.50	2.83	1.27
SUM/FALL	UNIMPACTED	UNIMPACTED	7.80	9.01	1.17	.52	-1.21*	-.16*	-.07*
SUM/FALL	F.IMPACTED	FOR.IMPACTED	7.80	9.01	3.92	1.75	-1.21*	-.52*	-.23*
SUM/FALL	IMPACTED	CLEARCUT	7.80	4.73	2.06	.92	3.07	1.34	.60
ANNUAL TOTAL					15.43	6.90		11.37	5.08

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT NEGATIVE FLOW.

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE I

WATERSHED: JAMES CREEK - PROPOSED

PRESCRIPTION ASPECT: EAST

ENERGY-ASPECT CLASSIFICATION: MEDIUM

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	3.23	-
OPEN	8.14	-
TOTAL	11.37	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS (%/100)	(IN)	(CFS)	FLOW FROM OPEN AREAS (%/100)	(IN)	(CFS)	INTERPOLTD. FLOW (IN)	(CFS)	TOTAL FLOW (IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0075	.06	.36	.00	.00	.06	.36
4	.0000	.00	.00	.0200	.16	.97	.00	.00	.16	.97
5	.0000	.00	.00	.0350	.28	1.70	.00	.00	.28	1.70
6	.0000	.00	.00	.0550	.45	2.67	.00	.00	.45	2.67
7	.0050	.02	.10	.0750	.61	3.64	.00	.00	.63	3.73
8	.0150	.05	.29	.0950	.77	4.61	.00	.00	.82	4.90
9	.0300	.10	.58	.1350	1.10	6.55	.00	.00	1.20	7.13
10	.0450	.15	.87	.1550	1.26	7.52	.00	.00	1.41	8.39
11	.0650	.21	1.25	.1600	1.30	7.76	.00	.00	1.51	9.01
12	.1000	.32	1.93	.1300	1.06	6.31	.00	.00	1.38	8.23
13	.1300	.42	2.50	.0825	.67	4.00	.00	.00	1.09	6.51
14	.1375	.44	2.65	.0325	.26	1.58	.00	.00	.71	4.22
15	.1400	.45	2.70	.0125	.10	.61	.00	.00	.55	3.30
16	.1350	.44	2.60	.0050	.04	.24	.00	.00	.48	2.84
17	.1150	.37	2.21	.0000	.00	.00	.00	.00	.37	2.21
18	.0600	.19	1.16	.0000	.00	.00	.00	.00	.19	1.16
19	.0200	.06	.39	.0000	.00	.00	.00	.00	.06	.39
20	.0025	.01	.05	.0000	.00	.00	.00	.00	.01	.05
21	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
22	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
23	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

PRESCRIPTION DATA FOR SUBDRAINAGE II

LOCATED IN WATERSHED: JAMES CREEK - PROPOSED

TOTAL PRESCRIPTION AREA: 463.0 ACRES

PRESCRIPTION ASPECT: NORTH

CANOPY OPENING IN PRESCRIPTION: YES

BASELINE COVER DENSITY: .22 PERCENT AS A DECIMAL

SOIL IDENTIFICATION:

AVERAGE SOIL DEPTH: 3.0 FEET

AVERAGE TREE HEIGHT: 70.0 FEET

NUMBER OF SILVICULTURAL STATES: 3

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
UNIMPACTED	UNIMPACTED	85.0	LODGEPOLE PINE	.0	.22	1.00
FOR. IMPACTED	FORESTED IMPACTED	189.0	LODGEPOLE PINE	.0	.22	-1.00*
CLEARCUT	IMPACTED	189.0	LODGEPOLE PINE	.0	.00	-1.00*

* NEGATIVE VALUES INDICATE UNSPECIFIED SNOW RETENTION COEFFICIENTS.

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY,FEBRUARY	9.60
SPRING	MARCH, APRIL, MAY, JUNE	11.60
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	8.20

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE II WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA			RETEN.COEF.		PRECIP.(IN)		BASAL AREA	COVER DEN.		ET MOD	ET(INCHES)	
			ACRES	%PRE.	%WSD.	UNADJ	ADJ	UNADJ	ADJ	(FT2/A)	(%)	%CDMX	COEF.	BASE.	ADJ
WINTER	UNIMPACTED	UNIMPACTED	85.0	.184	.045	1.00	1.00	9.60	9.60	.0	.22	1.00	1.00	1.38	1.38
WINTER	F.IMPACTED	F.IMPACTED	189.0	.408	.099	1.00	.73	9.60	6.96	.0	.22	1.00	1.00	1.38	1.38
WINTER	IMPACTED	CLEARCUT	189.0	.408	.099	1.27	1.27	9.60	12.24	.0	.00	.00	.60	1.38	.83
SPRING	UNIMPACTED	UNIMPACTED	85.0	.184	.045	1.00	1.00	11.60	11.60	.0	.22	1.00	1.00	6.00	6.00
SPRING	F.IMPACTED	F.IMPACTED	189.0	.408	.099	1.00	.73	11.60	8.41	.0	.22	1.00	1.00	5.42	5.42
SPRING	IMPACTED	CLEARCUT	189.0	.408	.099	1.27	1.27	11.60	14.79	.0	.00	.00	1.10	6.00	6.60
SUM/FALL	UNIMPACTED	UNIMPACTED	85.0	.184	.045	1.00	1.00	8.20	8.20	.0	.22	1.00	1.00	9.06	9.06
SUM/FALL	F.IMPACTED	F.IMPACTED	189.0	.408	.099	1.00	1.00	8.20	8.20	.0	.22	1.00	1.00	9.06	9.06
SUM/FALL	IMPACTED	CLEARCUT	189.0	.408	.099	1.00	1.00	8.20	8.20	.0	.00	.00	.45	9.06	4.08

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE II WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION			WATER AVAILABLE FOR STREAMFLOW		
				STATE	PRESCRIPT	WATERSHED	STATE	PRESCRIPT	WATERSHED
WINTER	UNIMPACTED	UNIMPACTED	9.60	1.38	.25	.06	8.22	1.51	.37
WINTER	F.IMPACTED	F.IMPACTED	6.96	1.38	.56	.14	5.58	2.28	.55
WINTER	IMPACTED	CLEARCUT	12.24	.83	.34	.08	11.41	4.66	1.13
SPRING	UNIMPACTED	UNIMPACTED	11.60	6.00	1.10	.27	5.60	1.03	.25
SPRING	F.IMPACTED	F.IMPACTED	8.41	5.42	2.21	.54	2.99	1.22	.30
SPRING	IMPACTED	CLEARCUT	14.79	6.60	2.69	.66	8.19	3.34	.81
SUM/FALL	UNIMPACTED	UNIMPACTED	8.20	9.06	1.66	.40	-.86*	-.16*	-.04*
SUM/FALL	F.IMPACTED	F.IMPACTED	8.20	9.06	3.70	.90	-.86*	-.35*	-.09*
SUM/FALL	IMPACTED	CLEARCUT	8.20	4.08	1.66	.41	4.12	1.68	.41
ANNUAL TOTAL					14.19	3.46		15.21	3.71

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT NEGATIVE FLOW.

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE II

WATERSHED: JAMES CREEK - PROPOSED

PRESCRIPTION ASPECT: NORTH

ENERGY-ASPECT CLASSIFICATION: LOW

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	5.53	-
OPEN	9.69	-
TOTAL	15.21	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS (%/100)	(IN)	(CFS)	FLOW FROM OPEN AREAS (%/100)	(IN)	(CFS)	INTERPOLTD. FLOW (IN)	(CFS)	TOTAL FLOW (IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
4	.0000	.00	.00	.0025	.02	.08	.00	.00	.02	.08
5	.0000	.00	.00	.0100	.10	.31	.00	.00	.10	.31
6	.0000	.00	.00	.0200	.19	.63	.00	.00	.19	.63
7	.0000	.00	.00	.0325	.31	1.02	.00	.00	.31	1.02
8	.0025	.01	.04	.0525	.51	1.65	.00	.00	.52	1.70
9	.0100	.06	.18	.0950	.92	2.99	.00	.00	.98	3.17
10	.0200	.11	.36	.1425	1.38	4.48	.00	.00	1.49	4.84
11	.0475	.26	.85	.1550	1.50	4.88	.00	.00	1.76	5.73
12	.0725	.40	1.30	.1550	1.50	4.88	.00	.00	1.90	6.18
13	.0925	.51	1.66	.1400	1.36	4.40	.00	.00	1.87	6.06
14	.1050	.58	1.89	.0800	.77	2.52	.00	.00	1.36	4.40
15	.1125	.62	2.02	.0500	.48	1.57	.00	.00	1.11	3.59
16	.1150	.64	2.06	.0325	.31	1.02	.00	.00	.95	3.09
17	.1150	.64	2.06	.0200	.19	.63	.00	.00	.83	2.69
18	.1125	.62	2.02	.0100	.10	.31	.00	.00	.72	2.33
19	.0975	.54	1.75	.0025	.02	.08	.00	.00	.56	1.83
20	.0550	.30	.99	.0000	.00	.00	.00	.00	.30	.99
21	.0250	.14	.45	.0000	.00	.00	.00	.00	.14	.45
22	.0125	.07	.22	.0000	.00	.00	.00	.00	.07	.22
23	.0050	.03	.09	.0000	.00	.00	.00	.00	.03	.09
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

PRESCRIPTION DATA FOR SUBDRAINAGE III
LOCATED IN WATERSHED: JAMES CREEK - PROPOSED

TOTAL PRESCRIPTION AREA: 588.0 ACRES

PRESCRIPTION ASPECT: WEST

CANOPY OPENING IN PRESCRIPTION: YES

BASELINE COVER DENSITY: .18 PERCENT AS A DECIMAL

SOIL IDENTIFICATION:

AVERAGE SOIL DEPTH: 3.0 FEET

AVERAGE TREE HEIGHT: 70.0 FEET

NUMBER OF SILVICULTURAL STATES: 3

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	COVER DENSITY (PERCENT/100)	SNOW RETENTION COEFFICIENT
UNIMPACTED	UNIMPACTED	244.0	LODGEPOLE PINE	.0	.18	1.00
FOR. IMPACTED	FORESTED IMPACTED	172.0	LODGEPOLE PINE	.0	.18	-1.00*
CLEARCUT	IMPACTED	172.0	LODGEPOLE PINE	.0	.00	-1.00*

* NEGATIVE VALUES INDICATE UNSPECIFIED SNOW RETENTION COEFFICIENTS.

PRECIPITATION

SEASON	MONTHS	INCHES
WINTER	OCTOBER, NOVEMBER, DECEMBER, JANUARY, FEBRUARY	8.00
SPRING	MARCH, APRIL, MAY, JUNE	11.00
SUMMER AND FALL	JULY, AUGUST, SEPTEMBER	7.80

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: SUBDRAINAGE III WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA ACRES	AREA %PRE.	AREA %WSD.	RETEN.COEF. UNADJ	RETEN.COEF. ADJ	PRECIP.(IN) UNADJ	PRECIP.(IN) ADJ	BASAL AREA (FT2/A)	COVER DEN. (%)	COVER DEN. %CDMX	ET MOD COEF.	ET(INCHES) BASE.	ET(INCHES) ADJ
WINTER	UNIMPACTED	UNIMPACTED	244.0	.415	.128	1.00	1.00	8.00	8.00	.0	.18	1.00	1.00	1.80	1.80
WINTER	F.IMPACTED	F.IMPACTED	172.0	.293	.090	1.00	.73	8.00	5.80	.0	.18	1.00	1.00	1.80	1.80
WINTER	IMPACTED	CLEARCUT	172.0	.293	.090	1.27	1.27	8.00	10.20	.0	.00	.00	.60	1.80	1.08
SPRING	UNIMPACTED	UNIMPACTED	244.0	.415	.128	1.00	1.00	11.00	11.00	.0	.18	1.00	1.00	7.00	7.00
SPRING	F.IMPACTED	F.IMPACTED	172.0	.293	.090	1.00	.73	11.00	7.98	.0	.18	1.00	1.00	6.02	6.02
SPRING	IMPACTED	CLEARCUT	172.0	.293	.090	1.27	1.27	11.00	14.02	.0	.00	.00	1.08	7.00	7.52
SUM/FALL	UNIMPACTED	UNIMPACTED	244.0	.415	.128	1.00	1.00	7.80	7.80	.0	.18	1.00	1.00	9.01	9.01
SUM/FALL	F.IMPACTED	F.IMPACTED	172.0	.293	.090	1.00	1.00	7.80	7.80	.0	.18	1.00	1.00	9.01	9.01
SUM/FALL	IMPACTED	CLEARCUT	172.0	.293	.090	1.00	1.00	7.80	7.80	.0	.00	.00	.52	9.01	4.73

PRESCRIPTION WATER BALANCE

PRESCRIPTION: SUBDRAINAGE III WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	ADJUSTED PRECIPITATION (INCHES)	WEIGHTED EVAPOTRANSPIRATION STATE	WEIGHTED EVAPOTRANSPIRATION PRESCRIPT	WEIGHTED EVAPOTRANSPIRATION WATERSHED	WATER AVAILABLE FOR STREAMFLOW STATE	WATER AVAILABLE FOR STREAMFLOW PRESCRIPT	WATER AVAILABLE FOR STREAMFLOW WATERSHED
WINTER	UNIMPACTED	UNIMPACTED	8.00	1.80	.75	.23	6.20	2.57	.80
WINTER	F.IMPACTED	F.IMPACTED	5.80	1.80	.53	.16	4.00	1.17	.36
WINTER	IMPACTED	CLEARCUT	10.20	1.08	.32	.10	9.12	2.67	.83
SPRING	UNIMPACTED	UNIMPACTED	11.00	7.00	2.90	.90	4.00	1.66	.51
SPRING	F.IMPACTED	F.IMPACTED	7.98	6.02	1.76	.55	1.95	.57	.18
SPRING	IMPACTED	CLEARCUT	14.02	7.52	2.20	.68	6.50	1.90	.59
SUM/FALL	UNIMPACTED	UNIMPACTED	7.80	9.01	3.74	1.16	-1.21*	-.50*	-.15*
SUM/FALL	F.IMPACTED	F.IMPACTED	7.80	9.01	2.63	.81	-1.21*	-.35*	-.11*
SUM/FALL	IMPACTED	CLEARCUT	7.80	4.73	1.38	.43	3.07	.90	.28
ANNUAL TOTAL					16.21	5.01		10.59	3.27

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT NEGATIVE FLOW.

SIX DAY AVERAGE PRESCRIPTION HYDROGRAPH

PRESCRIPTION: SUBDRAINAGE III

WATERSHED: JAMES CREEK - PROPOSED

PRESCRIPTION ASPECT: WEST

ENERGY-ASPECT CLASSIFICATION: MEDIUM

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	5.12	-
OPEN	5.47	-
TOTAL	10.59	-

6-DAY INTERVAL	FLOW FROM FORESTED AREAS (%/100)	(IN)	(CFS)	FLOW FROM OPEN AREAS (%/100)	(IN)	(CFS)	INTERPOLTD. FLOW (IN)	(CFS)	TOTAL FLOW (IN)	(CFS)
1	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
2	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
3	.0000	.00	.00	.0075	.04	.17	.00	.00	.04	.17
4	.0000	.00	.00	.0200	.11	.45	.00	.00	.11	.45
5	.0000	.00	.00	.0350	.19	.79	.00	.00	.19	.79
6	.0000	.00	.00	.0550	.30	1.24	.00	.00	.30	1.24
7	.0050	.03	.11	.0750	.41	1.69	.00	.00	.44	1.80
8	.0150	.08	.32	.0950	.52	2.14	.00	.00	.60	2.46
9	.0300	.15	.63	.1350	.74	3.04	.00	.00	.89	3.68
10	.0450	.23	.95	.1550	.85	3.50	.00	.00	1.08	4.45
11	.0650	.33	1.37	.1600	.87	3.61	.00	.00	1.21	4.98
12	.1000	.51	2.11	.1300	.71	2.93	.00	.00	1.22	5.04
13	.1300	.67	2.75	.0825	.45	1.86	.00	.00	1.12	4.61
14	.1375	.70	2.90	.0325	.18	.73	.00	.00	.88	3.64
15	.1400	.72	2.96	.0125	.07	.28	.00	.00	.79	3.24
16	.1350	.69	2.85	.0050	.03	.11	.00	.00	.72	2.96
17	.1150	.59	2.43	.0000	.00	.00	.00	.00	.59	2.43
18	.0600	.31	1.27	.0000	.00	.00	.00	.00	.31	1.27
19	.0200	.10	.42	.0000	.00	.00	.00	.00	.10	.42
20	.0025	.01	.05	.0000	.00	.00	.00	.00	.01	.05
21	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
22	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
23	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
24	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
25	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
26	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
27	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
28	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
29	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
30	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
56	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
57	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
58	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
59	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
60	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00
61	.0000	.00	.00	.0000	.00	.00	.00	.00	.00	.00

WATERSHED WATER BALANCE SUMMARY

WATERSHED: JAMES CREEK - PROPOSED CONDITION: PROPOSED - A

PRESCRIPTION IDENTIFICATION	ANNUAL EVAPOTRANS (INCHES)	WEIGHTED	ANNUAL STREAMFLOW (INCHES)	WEIGHTED
SUBDRAINAGE I	15.43	6.90	11.37	5.08
SUBDRAINAGE II	14.19	3.46	15.21	3.71
SUBDRAINAGE III	16.21	5.01	10.59	3.27
TOTAL		15.37		12.06

SIX DAY AVERAGE WATERSHED HYDROGRAPH

FOR

JAMES CREEK - PROPOSED

ORIGIN OF FLOW	FLOW (IN)	INTERPOLATION FACTOR
FORESTED	4.37	-
OPEN	7.69	-
TOTAL	12.06	-

6-DAY INTERVAL	FORESTED FLOW (IN)	FORESTED FLOW (CFS)	OPEN FLOW (IN)	OPEN FLOW (CFS)	INTERPOLTD. FLOW (IN)	INTERPOLTD. FLOW (CFS)	TOTAL FLOW (IN)	TOTAL FLOW (CFS)
1	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.04	.53	.00	.00	.04	.53
4	.00	.00	.11	1.50	.00	.00	.11	1.50
5	.00	.00	.21	2.80	.00	.00	.21	2.80
6	.00	.00	.34	4.54	.00	.00	.34	4.54
7	.02	.20	.48	6.35	.00	.00	.49	6.55
8	.05	.65	.63	8.40	.00	.00	.68	9.05
9	.10	1.39	.94	12.58	.00	.00	1.05	13.97
10	.16	2.18	1.16	15.50	.00	.00	1.33	17.67
11	.26	3.48	1.22	16.25	.00	.00	1.48	19.72
12	.40	5.34	1.06	14.11	.00	.00	1.46	19.45
13	.52	6.91	.77	10.27	.00	.00	1.29	17.18
14	.56	7.44	.36	4.83	.00	.00	.92	12.26
15	.58	7.67	.18	2.46	.00	.00	.76	10.13
16	.56	7.52	.10	1.38	.00	.00	.67	8.89
17	.50	6.71	.05	.63	.00	.00	.55	7.34
18	.33	4.44	.02	.31	.00	.00	.36	4.76
19	.19	2.56	.01	.08	.00	.00	.20	2.64
20	.08	1.09	.00	.00	.00	.00	.08	1.09
21	.03	.45	.00	.00	.00	.00	.03	.45
22	.02	.22	.00	.00	.00	.00	.02	.22
23	.01	.09	.00	.00	.00	.00	.01	.09
24	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
56	.00	.00	.00	.00	.00	.00	.00	.00
57	.00	.00	.00	.00	.00	.00	.00	.00
58	.00	.00	.00	.00	.00	.00	.00	.00
59	.00	.00	.00	.00	.00	.00	.00	.00
60	.00	.00	.00	.00	.00	.00	.00	.00
61	.00	.00	.00	.00	.00	.00	.00	.00

2.2 EXAMPLE 2

The rain-dominated, 8800 acre Trout Creek watershed is analyzed twice in this example. The first watershed analysis represents a baseline condition where only one prescription with one state (forested) is applied. The prescription, hence the watershed in this example, is assumed to behave hydrologically as though it had only one aspect (Northeast), one soil type and depth (sandy loam, 2.5 feet), one baseline leaf area index (40), one tree species (Douglas fir) and one precipitation regime. The user has gauged flow records and, therefore, supplies a flow duration curve (DISTRIBUTION input cards) instead of defaulting to the regional flow duration curve.

As part of an analysis for alternative management scenarios for this watershed, the user wishes to examine water yield at a point 12 years in the future. At that time, portions of the area are anticipated to be partially recovered, hydrologically, from harvest activities which were presumed to have occurred during the intervening time period. Thus, the second watershed analysis describes the proposed condition by using one prescription and four states. These four states must be identified so that the proposed condition at year 12 can evaluate the clearcuts which have had an opportunity to recover hydrologically. Therefore, three of the states describe the old clearcuts (12, 7, and 3 years) which have recovered to various degrees as indicated by their residual basal area (10, 6, and 3, respectively). The fourth state describes the remainder of the watershed which is yet to be harvested.

In using the DISTRIBUTION input option (i.e., user-supplied flow duration curve), the total streamflow computed by the WET model for each analysis is compared with the total streamflow entered on a DISTRIBUTION card which in this case is 36.5 inches. The ratio of the two values is then used to adjust the user-supplied flow duration curve.

A listing of the input data and resultant WET output for this example may be obtained by submitting the following commands.

```
@PRT,S WSDU*SAM.WETDATA5B
@XQT WSDU*WATER.WET
@ADD WSDU*SAM.WETDATA5B
```

```
Col 5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

WRENSSANALYSIS DISTRIBUTION CARD EXAMPLE          2 2
WATERSHED TROUT CREEK - BASELINE          5 18800.0 0 1 0 12121   20
DISTRIBUTION    .0       6.3
DISTRIBUTION  10.0       3.2
DISTRIBUTION  20.0       2.0
DISTRIBUTION  30.0        .8
DISTRIBUTION  40.0        .6
DISTRIBUTION  50.0        .5
DISTRIBUTION  60.0        .4
DISTRIBUTION  70.0        .3
DISTRIBUTION  80.0        .2
DISTRIBUTION  90.0        .1
DISTRIBUTION 100.0        .0
DISTRIBUTION    .0      36.5
PRECIPITATION  27.0 32.0 13.0  5.0    .00    .00    .00    .00
PRESCRIPTIONO BASELINE      8800.026 40.0   .0    .0     SANDY LOAM      2.5 12
STATE FORESTED        640.00    .08800.0    .0 3 2    .0   .0 0
WATERSHED TROUT CREEK - PROPOSED          5 18800.0 0 1 0 22121   20
DISTRIBUTION    .0       6.3
DISTRIBUTION  10.0       3.2
DISTRIBUTION  20.0       2.0
DISTRIBUTION  30.0        .8
DISTRIBUTION  40.0        .6
DISTRIBUTION  50.0        .5
DISTRIBUTION  60.0        .4
DISTRIBUTION  70.0        .3
DISTRIBUTION  80.0        .2
DISTRIBUTION  90.0        .1
DISTRIBUTION 100.0        .0
DISTRIBUTION    .0      36.5
PRECIPITATION  27.0 32.0 13.0  5.0    .00    .00    .00    .00
PRESCRIPTIONO PROPOSED      8800.026 40.0   .0    .0     SANDY LOAM      2.5 41
STATE FORESTED        640.00    .06100.0    .0 3 2    .0   .0 0
STATE CUT-12YR        610.00    .0 900.0    .0 1 1    .0   .0 0
STATE CUT- 7YR        6 6.00    .0 900.0    .0 1 1    .0   .0 0
STATE CUT- 3YR        6 3.00    .0 900.0    .0 1 1    .0   .0 0
```

EXAMPLE 2 - OUTPUT

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                              WSDU*WATER.WET PROGRAM

                          WATERSHED SYSTEMS DEVELOPMENT GROUP
                                  FEBRUARY 1984


    THIS PROGRAM IS A COMPUTERIZED VERSION OF THE HYDROLOGY
PROCEDURE AS DESCRIBED IN THE HANDBOOK "AN APPROACH TO WATER
RESOURCES EVALUATION NON-POINT SILVICULTURE SOURCES" (WRENSS).
FOR A MORE DETAILED EXPLANATION OF THIS OUTPUT CONSULT THE
HYDROLOGY CHAPTER IN THE HANDBOOK.  THE USER OF THIS PROGRAM
SHOULD BE AWARE OF THE STRENGTHS, WEAKNESSES, AND LIMITATIONS
OF THE WATER YIELD ESTIMATION PROCEDURE.


************************************************************
*                                                          *
*          SEE THE WSDG USERGUIDE PROGRAM                  *
*                                                          *
*          FOR CHANGES AND UPDATES INVOLVED                *
*                                                          *
*          WITH THE EXECUTION OF THIS PROGRAM              *
*                                                          *
*          TO INITIATE THE USERGUIDE PROGRAM               *
*                                                          *
*          ENTER IN DEMAND: @XQT WSDU*WSDG.USERGUIDE       *
*                                                          *
************************************************************


WRENS ANALYSIS IDENTIFICATION: DISTRIBUTION CARD EXAMPLE

NUMBER OF WATERSHEDS TO BE ANALYZED:   2

MEASUREMENT SYSTEM: ENGLISH

--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
```

WATERSHED DATA FOR TROUT CREEK - BASELINE

HYDROLOGIC REGION: PROVINCE 5, NORTHWEST PROVINCE -PACIFIC COAST — CONDITION: EXISTING

DOMINANT PRECIPITATION: RAIN — TOTAL WATERSHED AREA: 8800.0 ACRES

TYPE OF FLOW ANALYSIS: NOT APPLICABLE — LATITUDE: .0 — NUMBER OF PRESCRIPTIONS: 1

PRECIPITATION

SEASON	MONTHS	INCHES
FALL	SEPTEMBER, OCTOBER, NOVEMBER	27.00
WINTER	DECEMBER, JANUARY, FEBRUARY	32.00
SPRING	MARCH, APRIL, MAY	13.00
SUMMER	JUNE, JULY, AUGUST	5.00

PRESCRIPTION DATA FOR BASELINE

LOCATED IN WATERSHED: TROUT CREEK - BASELINE

TOTAL PRESCRIPTION AREA: 8800.0 ACRES — SOIL IDENTIFICATION: SANDY LOAM

PRESCRIPTION ASPECT: NORTHEAST — AVERAGE SOIL DEPTH: 2.5 FEET

CANOPY OPENING IN PRESCRIPTION: NO — AVERAGE TREE HEIGHT: .0 FEET

BASELINE LEAF AREA INDEX: 40.00 — NUMBER OF SILVICULTURAL STATES: 1

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	LEAF AREA INDEX
FORESTED	UNIMPACTED	8800.0	DOUGLAS-FIR	.0	40.00

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: BASELINE WATERSHED: TROUT CREEK - BASELINE CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA (AC)	AREA %PRE.	AREA %WSD.	PRECIP. (IN)	BASAL AREA (FT2/A)	LEAF AREA INDEX	ET MODIFIER COEF.	ROOT MODIFIER COEF.	ET (IN) BASE.	ET (IN) ADJ
FALL	UNIMPACTED	FORESTED	8800.0	1.000	1.000	27.00	.0	40.00	1.00	.94	9.45	8.89
WINTER	UNIMPACTED	FORESTED	8800.0	1.000	1.000	32.00	.0	40.00	1.00	1.00	7.13	7.13
SPRING	UNIMPACTED	FORESTED	8800.0	1.000	1.000	13.00	.0	40.00	1.00	1.00	12.01	12.01
SUMMER	UNIMPACTED	FORESTED	8800.0	1.000	1.000	5.00	.0	40.00	1.00	.98	10.28	10.06

PRESCRIPTION WATER BALANCE

PRESCRIPTION: BASELINE WATERSHED: TROUT CREEK - BASELINE CONDITION: EXISTING

SEASON	PRECIPITATION (IN)	EVAPOTRANSPIRATION (IN)	EVAPOTRANSPIRATION WEIGHTED	WATER AVAILABLE FOR STREAMFLOW (IN)	WATER AVAILABLE FOR STREAMFLOW WEIGHTED
FALL	27.00	8.89	8.89	18.11	18.11
WINTER	32.00	7.13	7.13	24.87	24.87
SPRING	13.00	12.01	12.01	.99	.99
SUMMER	5.00	10.06	10.06	-5.06*	-5.06*
ANNUAL	77.00	38.08	38.08	38.92	38.92

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT ACTUAL FLOW.

WATERSHED WATER BALANCE SUMMARY

WATERSHED: TROUT CREEK - BASELINE CONDITION: EXISTING

PRESCRIPTION IDENTIFICATION	ANNUAL EVAPOTRANS (INCHES)	ANNUAL EVAPOTRANS WEIGHTED	ANNUAL STREAMFLOW (INCHES)	ANNUAL STREAMFLOW WEIGHTED
BASELINE	38.08	38.08	38.92	38.92
TOTAL		38.08		38.92

7-DAY AVERAGE FLOW DURATION CURVE

WATERSHED: TROUT CREEK - BASELINE

TOTAL STREAMFLOW: 38.9 IN REGIONAL STREAMFLOW: 36.5 IN

ADJUSTMENT RATIO: 1.066 CONDITION: EXISTING

POINT NUMBER	% EQUALED OR EXCEEDED	REGIONAL FLOW (IN)	PREDICTED FLOW (IN/7 DAYS)	PREDICTED FLOW (CFS)
1	.0	6.3	6.7	354.8
2	10.0	3.2	3.4	180.2
3	20.0	2.0	2.1	112.6
4	30.0	.8	.9	45.1
5	40.0	.6	.6	33.8
6	50.0	.5	.5	28.2
7	60.0	.4	.4	22.5
8	70.0	.3	.3	16.9
9	80.0	.2	.2	11.3
10	90.0	.1	.1	5.6
11	100.0	.0	.0	.0

WATERSHED DATA FOR TROUT CREEK - PROPOSED

HYDROLOGIC REGION: PROVINCE 5, NORTHWEST PROVINCE -PACIFIC COAST — CONDITION: PROPOSED - A

DOMINANT PRECIPITATION: RAIN — TOTAL WATERSHED AREA: 8800.0 ACRES

TYPE OF FLOW ANALYSIS: NOT APPLICABLE — LATITUDE: .0 — NUMBER OF PRESCRIPTIONS: 1

PRECIPITATION

SEASON	MONTHS	INCHES
FALL	SEPTEMBER, OCTOBER, NOVEMBER	27.00
WINTER	DECEMBER, JANUARY, FEBRUARY	32.00
SPRING	MARCH, APRIL, MAY	13.00
SUMMER	JUNE, JULY, AUGUST	5.00

PRESCRIPTION DATA FOR PROPOSED

LOCATED IN WATERSHED: TROUT CREEK - PROPOSED

TOTAL PRESCRIPTION AREA: 8800.0 ACRES — SOIL IDENTIFICATION: SANDY LOAM

PRESCRIPTION ASPECT: NORTHEAST — AVERAGE SOIL DEPTH: 2.5 FEET

CANOPY OPENING IN PRESCRIPTION: YES — AVERAGE TREE HEIGHT: .0 FEET

BASELINE LEAF AREA INDEX: 40.00 — NUMBER OF SILVICULTURAL STATES: 4

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (ACRES)	DOMINANT VEGETATION	BASAL AREA (FT2/ACRE)	LEAF AREA INDEX
FORESTED	UNIMPACTED	6100.0	DOUGLAS-FIR	.0	40.00
CUT-12YR	IMPACTED	900.0	DOUGLAS-FIR	.0	10.00
CUT- 7YR	IMPACTED	900.0	DOUGLAS-FIR	.0	6.00
CUT- 3YR	IMPACTED	900.0	DOUGLAS-FIR	.0	3.00

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: PROPOSED WATERSHED: TROUT CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA (AC)	AREA %PRE.	AREA %WSD.	PRECIP. (IN)	BASAL AREA (FT2/A)	LEAF AREA INDEX	ET MODIFIER COEF.	ROOT MODIFIER COEF.	ET (IN) BASE.	ET (IN) ADJ
FALL	UNIMPACTED	FORESTED	6100.0	.693	.693	27.00	.0	40.00	1.00	.94	9.45	6.16
FALL	IMPACTED	CUT-12YR	900.0	.102	.102	27.00	.0	10.00	.95	.94	9.45	.87
FALL	IMPACTED	CUT- 7YR	900.0	.102	.102	27.00	.0	6.00	.89	.94	9.45	.81
FALL	IMPACTED	CUT- 3YR	900.0	.102	.102	27.00	.0	3.00	.79	.94	9.45	.72
WINTER	UNIMPACTED	FORESTED	6100.0	.693	.693	32.00	.0	40.00	1.00	1.00	7.13	4.94
WINTER	IMPACTED	CUT-12YR	900.0	.102	.102	32.00	.0	10.00	.67	1.00	7.13	.49
WINTER	IMPACTED	CUT- 7YR	900.0	.102	.102	32.00	.0	6.00	.53	1.00	7.13	.39
WINTER	IMPACTED	CUT- 3YR	900.0	.102	.102	32.00	.0	3.00	.40	1.00	7.13	.29
SPRING	UNIMPACTED	FORESTED	6100.0	.693	.693	13.00	.0	40.00	1.00	1.00	12.01	8.32
SPRING	IMPACTED	CUT-12YR	900.0	.102	.102	13.00	.0	10.00	.80	1.00	12.01	.98
SPRING	IMPACTED	CUT- 7YR	900.0	.102	.102	13.00	.0	6.00	.67	1.00	12.01	.83
SPRING	IMPACTED	CUT- 3YR	900.0	.102	.102	13.00	.0	3.00	.50	1.00	12.01	.61
SUMMER	UNIMPACTED	FORESTED	6100.0	.693	.693	5.00	.0	40.00	1.00	.98	10.28	6.97
SUMMER	IMPACTED	CUT-12YR	900.0	.102	.102	5.00	.0	10.00	.98	.98	10.28	1.01
SUMMER	IMPACTED	CUT- 7YR	900.0	.102	.102	5.00	.0	6.00	.94	.98	10.28	.96
SUMMER	IMPACTED	CUT- 3YR	900.0	.102	.102	5.00	.0	3.00	.84	.98	10.28	.86

PRESCRIPTION WATER BALANCE

PRESCRIPTION: PROPOSED WATERSHED: TROUT CREEK - PROPOSED CONDITION: PROPOSED - A

SEASON	PRECIPITATION (IN)	EVAPOTRANSPIRATION (IN)	EVAPOTRANSPIRATION WEIGHTED	WATER AVAILABLE FOR STREAMFLOW (IN)	WATER AVAILABLE FOR STREAMFLOW WEIGHTED
FALL	27.00	8.55	8.55	18.45	18.45
WINTER	32.00	6.11	6.11	25.89	25.89
SPRING	13.00	10.75	10.75	2.25	2.25
SUMMER	5.00	9.80	9.80	-4.80*	-4.80*
ANNUAL	77.00	35.21	35.21	41.79	41.79

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT ACTUAL FLOW.

WATERSHED WATER BALANCE SUMMARY

WATERSHED: TROUT CREEK - PROPOSED CONDITION: PROPOSED - A

PRESCRIPTION IDENTIFICATION	ANNUAL EVAPOTRANS (INCHES)	ANNUAL EVAPOTRANS WEIGHTED	ANNUAL STREAMFLOW (INCHES)	ANNUAL STREAMFLOW WEIGHTED
PROPOSED	35.21	35.21	41.79	41.79
TOTAL		35.21		41.79

7-DAY AVERAGE FLOW DURATION CURVE

WATERSHED: TROUT CREEK - PROPOSED

TOTAL STREAMFLOW: 41.8 IN REGIONAL STREAMFLOW: 36.5 IN

ADJUSTMENT RATIO: 1.145 CONDITION: PROPOSED - A

POINT NUMBER	% EQUALED OR EXCEEDED	REGIONAL FLOW (IN)	PREDICTED FLOW (IN/7 DAYS)	PREDICTED FLOW (CFS)
1	.0	6.3	7.2	381.0
2	10.0	3.2	3.7	193.5
3	20.0	2.0	2.3	120.9
4	30.0	.8	.9	48.4
5	40.0	.6	.7	36.3
6	50.0	.5	.6	30.2
7	60.0	.4	.5	24.2
8	70.0	.3	.3	18.1
9	80.0	.2	.2	12.1
10	90.0	.1	.1	6.0
11	100.0	.0	.0	.0

2.3 EXAMPLE 3

This example illustrates how two options in the WET program can be used to analyze changes due to proposed silvicultural activities on site-specific flow duration curves and on streamflows at specific dates of occurence. These two options use the least squares technique (see pages III.45-61 in WRENSS) instead of the evapotranspiration procedure used in the previous two examples.

The user in this case wishes to evaluate what effects to a critical fish habitat might be expected from a 50 percent reduction in watershed Leaf Area Index (a change from 6.0 to 3.0). The user's specific concern is for a particular location which has gauged flow records, and three representative dates as defined by the fisheries biologist. Thus we find one simulation of 144.2 hectare, rain dominated Grits Creek in which FLOW DURATION, FDCURVE, and CHANGE cards are used in the WET program.

A listing of the input data and resultant WET output for this example may be obtained by submitting the following commands.

```
@PRT,S WSDU*SAM.WETDATA2B
@XQT WSDU*WATER.WET
@ADD WSDU*SAM.WETDATA2B
```

```
Col 5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

WRENSSANALYSIS FDCURVE/CHANGE CARDS EXAMPLE      1 1
WATERSHED GRITS CREEK EXISTING           2 1 144.2 0 1 0 10 01   13 35.0
PRECIPITATION  23.3 75.2 60.5 27.0    .00    .00    .00    .00
PRESCRIPTIONO GRITS-EXISTING 144.268  6.0   .0    .0   .OCLAY LOAM       1.2 12
STATE FORESTED        8 6.0     .0 144.2    .0 3 2
FLOW DURATION 11  3   3.0
FDCURVE     .0   13.1
FDCURVE   10.0    3.9
FDCURVE   20.0    2.8
FDCURVE   30.0    2.0
FDCURVE   40.0    1.8
FDCURVE   50.0    1.0
FDCURVE   60.0     .7
FDCURVE   70.0     .6
FDCURVE   80.0     .4
FDCURVE   90.0     .3
FDCURVE  100.0     .0
CHANGE    3.0   10.0   90.
CHANGE    3.0   10.0  180.
CHANGE    3.0   10.0  270.
```

EXAMPLE 3 - OUTPUT

```
WSDU*WATER.WET PROGRAM

WATERSHED SYSTEMS DEVELOPMENT GROUP
FEBRUARY 1984


    THIS PROGRAM IS A COMPUTERIZED VERSION OF THE HYDROLOGY
PROCEDURE AS DESCRIBED IN THE HANDBOOK "AN APPROACH TO WATER
RESOURCES EVALUATION NON-POINT SILVICULTURE SOURCES" (WRENSS).
FOR A MORE DETAILED EXPLANATION OF THIS OUTPUT CONSULT THE
HYDROLOGY CHAPTER IN THE HANDBOOK.  THE USER OF THIS PROGRAM
SHOULD BE AWARE OF THE STRENGTHS, WEAKNESSES, AND LIMITATIONS
OF THE WATER YIELD ESTIMATION PROCEDURE


*************************************************************
*                                                           *
*          SEE THE WSDG USERGUIDE PROGRAM                   *
*                                                           *
*          FOR CHANGES AND UPDATES INVOLVED                 *
*                                                           *
*          WITH THE EXECUTION OF THIS PROGRAM               *
*                                                           *
*          TO INITIATE THE USERGUIDE PROGRAM                *
*                                                           *
*          ENTER IN DEMAND: @XQT WSDU*WSDG.USERGUIDE        *
*                                                           *
*************************************************************


WRENS ANALYSIS IDENTIFICATION: FDCURVE/CHANGE CARDS EXAMPLE

NUMBER OF WATERSHEDS TO BE ANALYZED:   1

MEASUREMENT SYSTEM: METRIC
```

EXAMPLE 3 - OUTPUT

WATERSHED DATA FOR GRITS CREEK EXISTING

HYDROLOGIC REGION: REGION 2, APPALACHIAN MOUNTAINS AND HIGHLANDS CONDITION: EXISTING

DOMINANT PRECIPITATION: RAIN TOTAL WATERSHED AREA: 144.2 HECTARES

TYPE OF FLOW ANALYSIS: SPECIFIC CHANGES & CURVE LATITUDE: 35.0 NUMBER OF PRESCRIPTIONS: 1

PRECIPITATION

SEASON	MONTHS	CM
FALL	SEPTEMBER, OCTOBER, NOVEMBER	23.30
WINTER	DECEMBER, JANUARY, FEBRUARY	75.20
SPRING	MARCH, APRIL, MAY	60.50
SUMMER	JUNE, JULY, AUGUST	27.00

PRESCRIPTION DATA FOR GRITS-EXISTING

LOCATED IN WATERSHED: GRITS CREEK EXISTING

TOTAL PRESCRIPTION AREA: 144.2 HECTARES
SOIL IDENTIFICATION: CLAY LOAM
PRESCRIPTION ASPECT: SOUTHWEST
AVERAGE SOIL DEPTH: 1.2 METERS
CANOPY OPENING IN PRESCRIPTION: NO
AVERAGE TREE HEIGHT: .0 METERS
BASELINE LEAF AREA INDEX: 6.00
NUMBER OF SILVICULTURAL STATES: 1

SUMMARY OF STATE DATA

STATE IDENTIFICATION	COMPARTMENT	AREA (HECTARES)	DOMINANT VEGETATION	BASAL AREA (M2/HA)	LEAF AREA INDEX
FORESTED	UNIMPACTED	144.2	DECIDUOUS	.0	6.00

PRESCRIPTION EVAPOTRANSPIRATION SUMMARY

PRESCRIPTION: GRITS-EXISTING WATERSHED: GRITS CREEK EXISTING CONDITION: EXISTING

SEASON	COMPARTMENT	STATE IDENTIFICATION	AREA (HA)	AREA %PRE.	AREA %WSD.	PRECIP. (CM)	BASAL AREA (M2/HA)	LEAF AREA INDEX	ET MODIFIER COEF.	ROOT MODIFIER COEF.	ET (CM) BASE.	ET (CM) ADJ
FALL	UNIMPACTED	FORESTED	144.2	1.000	1.000	23.30	.0	6.00	1.00	1.00	19.22	19.17
WINTER	UNIMPACTED	FORESTED	144.2	1.000	1.000	75.20	.0	6.00	1.00	1.00	8.78	8.78
SPRING	UNIMPACTED	FORESTED	144.2	1.000	1.000	60.50	.0	6.00	1.00	1.00	12.83	12.83
SUMMER	UNIMPACTED	FORESTED	144.2	1.000	1.000	27.00	.0	6.00	1.00	1.00	37.89	37.80

EXAMPLE 3 - OUTPUT

PRESCRIPTION WATER BALANCE

PRESCRIPTION: GRITS-EXISTING WATERSHED: GRITS CREEK EXISTING CONDITION: EXISTING

SEASON	PRECIPITATION (CM)	EVAPOTRANSPIRATION (CM)	EVAPOTRANSPIRATION WEIGHTED	WATER AVAILABLE FOR STREAMFLOW (CM)	WATER AVAILABLE FOR STREAMFLOW WEIGHTED
FALL	23.30	19.17	19.17	4.13	4.13
WINTER	75.20	8.78	8.78	66.42	66.42
SPRING	60.50	12.83	12.83	47.67	47.67
SUMMER	27.00	37.80	37.80	-10.80*	-10.80*
ANNUAL	186.00	78.58	78.58	107.42	107.42

* NEGATIVE VALUES INDICATE STORAGE DEPLETION NOT ACTUAL FLOW.

WATERSHED WATER BALANCE SUMMARY

WATERSHED: GRITS CREEK EXISTING CONDITION: EXISTING

PRESCRIPTION IDENTIFICATION	ANNUAL EVAPOTRANS (CM)	ANNUAL EVAPOTRANS WEIGHTED	ANNUAL STREAMFLOW (CM)	ANNUAL STREAMFLOW WEIGHTED
GRITS-EXISTING	78.58	78.58	107.42	107.42
TOTAL		78.58		107.42

7-DAY AVERAGE FLOW DURATION CURVE

WATERSHED: GRITS CREEK EXISTING

WATERSHED ASPECT CODE: 1.0 LEAF AREA INDEX CHANGE: 3.0

RELATIVE ROOTING DEPTH: .98 CONDITION: EXISTING

B0 = -.03 B1 = -.03 B2 = .13 B3 = .02 B4 = .03

POINT NUMBER	% EQUALED OR EXCEEDED	EXISTING FLOW (CM)	FLOW CHANGE (CM)	PROPOSED FLOW (CM)	PROPOSED FLOW (M3/S)
1	.0	13.1	.02	13.1	.3127
2	10.0	3.9	.29	4.2	.1000
3	20.0	2.8	.33	3.1	.0745
4	30.0	2.0	.35	2.3	.0560
5	40.0	1.8	.36	2.2	.0514
6	50.0	1.0	.38	1.4	.0329
7	60.0	.7	.39	1.1	.0260
8	70.0	.6	.39	1.0	.0236
9	80.0	.4	.40	.8	.0190
10	90.0	.3	.40	.7	.0167
11	100.0	.0	.41	.4	.0098

EXAMPLE 3 - OUTPUT

CHANGES IN FLOW FOR SPECIFIC DATES AND EXISTING FLOW LEVELS

FOR

GRITS CREEK EXISTING

WATERSHED ASPECT CODE: 1.0 AVERAGE REGIONAL ROOTING DEPTH: 1.2 METERS

RELATIVE ROOTING DEPTH: .985 AVERAGE WATERSHED ROOTING DEPTH: 1.2 METERS

CALCULATION NUMBER	CHANGE IN LEAF AREA INDEX	DAY NUMBER	SINE DAY	EXISTING FLOW (CM)	CHANGE IN FLOW (CM)	PROPOSED FLOW (CM)	PROPOSED FLOW(M3/S)
1	3.00	90.	3.000	10.00	3.98	13.98	.33
2	3.00	180.	2.043	10.00	2.86	12.86	.31
3	3.00	270.	1.002	10.00	1.64	11.64	.28

3.0 EXAMPLE OF THE WET-INLONG PROGRAM

This example illustrates the use of the interactive data-entry WET-INLONG program to generate a WET input data set. The responses to the prompted questions listed in this example will be used to create the following WET input data file. This data set is the same WET input used for the first watershed analysis in Example 1 of this Report.

```
Col 5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

WRENSSANALYSIS EXAMPLE FOR REGION 4 - SNOW       1 2
WATERSHED JAMES CREEK - BASELINE          4 21901.0 2 3 2 10 01   00   .0
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
PRESCRIPTIONOSUBDRAINAGE I   850.030  .25   .0    .0 70.0                3.0 12
STATE FORESTED         1  .25    .0 850.0    .0 3 2    .0 1.00 0
PRESCRIPTION1SUBDRAINAGE II  463.010  .22   .0    .0 70.0                3.0 12
PRECIPITATION   9.6 11.6  8.2   .0    .00    .00    .00    .00
STATE FORESTED         1  .22    .0 463.0    .0 3 2    .0 1.00 0
PRESCRIPTION1SUBDRAINAGE III 588.070  .18   .0    .0 70.0                3.0 12
PRECIPITATION   8.0 11.0  7.8   .0    .00    .00    .00    .00
STATE FORESTED         1  .18    .0 588.0    .0 3 2    .0 1.00 0
```

After becoming accustomed to the WET-INLONG program, the user may desire to speed up the question-and-answer process by using a program called WSDU*WATER.WET-INSHORT. This program is a modified version of the WET-INLONG program. It prompts the user for input without the use of explanatory notes or listing of possible answers as found in the WET-INLONG program. However, outside of the differences in how the questions are presented, the WSDU*WATER.WET-INSHORT program is identical to the WSDU*WATER.WET-INLONG program in producing a WET input data set. Additional information about the WET-INSHORT program may be obtained from the following sources: WSDG-AD-00007, "WSDU*WATER.WET: The Computerized Version of Chapter III - Hydrology - of the WRENSS Handbook," and the WSDU*WSDG.USERGUIDE program.

```
>@XQT WSDU*WATER.WET-INLONG


           WSDU*WATER.WET-INLONG PROGRAM
        WATERSHED SYSTEMS DEVELOPMENT GROUP
                  FEBRUARY 1984


THIS PROGRAM CREATES A DATA FILE (CARDS) FOR INPUT TO THE
WET PROGRAM.  IF YOU HAVE ANY QUESTIONS ABOUT THE OPERATION
OF THIS PROGRAM, PLEASE USE THE WSDG USERGUIDE PROGRAM.
TO INITIATE THIS PROGRAM ENTER: @XQT WSDU*WSDG.USERGUIDE
FOLLOWING TERMINATION OF THE WET-INLONG PROGRAM.

THE INPUT DATA FILE CREATED BY THIS PROGRAM IS WRITTEN
TO UNIT 10.  IF YOU WOULD LIKE TO EDIT ANY OF THE
PARAMETERS YOU ENTERED DURING EXECUTION OF THIS
PROGRAM, YOU MAY DO SO FOLLOWING COMPLETION OF THE
PROGRAM BY ENTERING @ED,U 10.

NOTE: IF MORE THAN ONE INPUT DATA VALUE IS ENTERED ON ONE
LINE, INSERT ONE OR MORE BLANK SPACES TO SEPARATE DATA VALUES.


ENTER WRENSS ANALYSIS IDENTIFICATION (MAX. 30 CHARACTERS).
>EXAMPLE FOR REGION 4 - SNOW

ENTER THE NUMBER OF WATERSHEDS OR ANALYSIS FOR THIS WRENSS ANALYSIS RUN
(MAX. VALUE: 999)
>1

ENTER THE SYSTEM OF MEASUREMENT USED FOR THIS WRENSS ANALYSIS RUN
1=METRIC  2=ENGLISH
>2

ENTER HYDROLOGIC REGION OR PROVINCE CODE NUMBER.
>4

***** WATERSHED/ANALYSIS NUMBER  1 *****

ENTER WATERSHED/ANALYSIS IDENTIFICATION (MAX. 30 CHARACTERS).
>JAMES CREEK - BASELINE

ENTER WATERSHED/ANALYSIS AREA IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>1901

DOMINANT PRECIPITATION CODE: 1=RAIN 2=SNOW
HYDROLOGIC REGIONS 2 AND 3 ARE RAIN-DOMINATED.
HYDROLOGIC REGIONS 1 AND 4 ARE SNOW-DOMINATED.
REGIONS 5, 6, AND 7 COULD BE EITHER.
>2
```

```
ENTER SNOW REDISTRIBUTION CODE: 1=LIKELY  2=NOT LIKELY
>2

ENTER NUMBER OF PRESCRIPTIONS (MAX. VALUE: 20)
>3

ENTER CANOPY OPENING CODE FOR WATERSHED: 1=OPEN  2=NOT OPEN
>2
ENTER STREAMFLOW DISTRIBUTION INPUT CODE:
0=NO INPUT
1=NORMALIZED BASELINE 6 DAY AVERAGE WATERSHED HYDROGRAPH FOLLOWS
2=BASELINE REGIONAL 7 DAY AVERAGE FLOW DURATION CURVE FOLLOWS
>0

ENTER CONDITION CODE FOR WATERSHED:
1=EXISTING, 2=PROPOSED A, 3=PROPOSED B, . . .
(MAX. 9 CONDITIONS).
>1

ENTER FOUR SEASONAL PRECIPITATION VALUES FOR WATERSHED
IN INCHES OR CENTIMETERS (MAX. VALUE: 999.9)
IF REGION HAS ONLY THREE SEASONS, ENTER ZERO FOR THE FOURTH SEASON
>8.0 11.0 7.8 0

DO YOU WANT TO ENTER BASELINE SEASONAL ET?  (1=YES  2=NO)
IF YOU CHOOSE NO, WET WILL DEFAULT TO WRENSS VALUES.
>2

***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER  1 *****

ENTER PRESCRIPTION IDENTIFICATION (MAX. 15 CHARACTERS).
>SUBDRAINAGE I

ENTER PRESCRIPTION AREA IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>850

ENTER PRESCRIPTION ASPECT CODE:
1=N  2=NE  3=E  4=SE  5=S  6=SW  7=W  8=NW
>3

DO YOU WISH TO ENTER BASELINE COVER DENSITY (BCD)
OR ESTIMATE IT BY BASAL AREA?
1=BCD  2=ESTIMATE BY BASAL AREA
>1

ENTER BASELINE COVER DENSITY (MAX. VALUE: .99)
>.25
```

```
ENTER AVERAGE TREE HEIGHT IN FEET OR METERS
(MAX. VALUE: 399.9)
>70.

SOIL DEPTH HAS NO SIGNIFICANCE IN SNOW-DOMINATED
REGIONS, BUT WET REQUIRES THIS PARAMETER.
ENTER AVERAGE SOIL DEPTH IN FEET OR METERS (MAX. VALUE: 12.9)
>3.

ENTER NUMBER OF SILVICULTURAL STATES IN PRESCRIPTION
(MAX. VALUE: 50)
>1

ENTER CANOPY OPENING CODE FOR PRESCRIPTION:  1=OPEN  2=NOT OPEN
>2

IS PRESCRIPTION PRECIPITATION DIFFERENT THAN MOST RECENT
PRECIPITATION DATA ENTERED (1=YES 2=NO)?
>2

***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER 1 *****
***** STATE NUMBER  1 *****

ENTER STATE IDENTIFICATION (MAX. 15 CHARACTERS).
>FORESTED

ENTER DOMINANT VEGETATION CODE FOR STATE:
1=LODGEPOLE PINE   2=SPRUCE-FIR
3=PONDEROSA PINE   4=WESTERN LARCH
5=HEMLOCK-SPRUCE   6=DOUGLAS FIR
7=CONIFEROUS   8=DECIDUOUS   9=MIXED
>1

ENTER COVER DENSITY (MAX. VALUE: .99)
>.25

ENTER AREA OF SILVICULTURAL STATE IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>850

UNLESS THE USER SPECIFIES THE SNOW RETENTION COEFFICIENT,
WET ALLOWS EACH PRESCRIPTION ONLY ONE IMPACTED STATE AND
ONE FORESTED IMPACTED STATE.
ENTER COMPARTMENT CODE
1=IMPACTED   2=FORESTED IMPACTED   3=UNIMPACTED
>3

ENTER CANOPY OPENING CODE FOR STATE: 1=OPEN  2=NOT OPEN
>2
```

```
ENTER SNOW RETENTION COEFFICIENT (MAX. VALUE: 2.00)
IF UNKNOWN ENTER: -1
>1.0

***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER  2 *****

ENTER PRESCRIPTION IDENTIFICATION (MAX. 15 CHARACTERS).
>SUBDRAINAGE II

ENTER PRESCRIPTION AREA IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>463

ENTER PRESCRIPTION ASPECT CODE:
1=N  2=NE  3=E  4=SE  5=S  6=SW  7=W  8=NW
>1

DO YOU WISH TO ENTER BASELINE COVER DENSITY (BCD)
OR ESTIMATE IT BY BASAL AREA?
1=BCD  2=ESTIMATE BY BASAL AREA
>1

ENTER BASELINE COVER DENSITY (MAX. VALUE: .99)
>.22

ENTER AVERAGE TREE HEIGHT IN FEET OR METERS
(MAX. VALUE: 399.9)
>70.

ENTER AVERAGE SOIL DEPTH IN FEET OR METERS (MAX. VALUE: 12.9)
>3.

ENTER NUMBER OF SILVICULTURAL STATES IN PRESCRIPTION
(MAX. VALUE: 50)
>1

ENTER CANOPY OPENING CODE FOR PRESCRIPTION: 1=OPEN  2=NOT OPEN
>2

IS PRESCRIPTION PRECIPITATION DIFFERENT THAN MOST RECENT
PRECIPITATION DATA ENTERED (1=YES 2=NO)?
>1

ENTER FOUR SEASONAL PRECIPITATION VALUES FOR PRESCRIPTION
IN INCHES OF CENTIMETERS (MAX. VALUE: 999.9)
IF REGION HAS ONLY THREE SEASONS, ENTER ZERO FOR THE FOURTH SEASON
>9.6 11.6 8.2 0
```

```
***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER 2 *****
***** STATE NUMBER  1 *****

ENTER STATE IDENTIFICATION (MAX. 15 CHARACTERS).
>FORESTED

ENTER DOMINANT VEGETATION CODE FOR STATE:
1=LODGEPOLE PINE    2=SPRUCE-FIR
3=PONDEROSA PINE    4=WESTERN LARCH
5=HEMLOCK-SPRUCE    6=DOUGLAS FIR
7=CONIFEROUS    8=DECIDUOUS    9=MIXED
>1

ENTER COVER DENSITY (MAX. VALUE: .99)
>.22

ENTER AREA OF SILVICULTURAL STATE IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>463

UNLESS THE USER SPECIFIES THE SNOW RETENTION COEFFICIENT,
WET ALLOWS EACH PRESCRIPTION ONLY ONE IMPACTED STATE AND
ONE FORESTED IMPACTED STATE.
ENTER COMPARTMENT CODE
1=IMPACTED    2=FORESTED IMPACTED    3=UNIMPACTED
>3

ENTER CANOPY OPENING CODE FOR STATE:  1=OPEN  2=NOT OPEN
>2

ENTER SNOW RETENTION COEFFICIENT (MAX. VALUE: 2.00)
IF UNKNOWN ENTER: -1
>1.0

***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER  3 *****

ENTER PRESCRIPTION IDENTIFICATION (MAX. 15 CHARACTERS).
>SUBDRAINAGE III

ENTER PRESCRIPTION AREA IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>588

ENTER PRESCRIPTION ASPECT CODE:
1=N  2=NE  3=E  4=SE  5=S  6=SW  7=W  8=NW
>7
```

```
DO YOU WISH TO ENTER BASELINE COVER DENSITY (BCD)
OR ESTIMATE IT BY BASAL AREA?
1=BCD  2=ESTIMATE BY BASAL AREA
>1

ENTER BASELINE COVER DENSITY (MAX. VALUE: .99)
>.18

ENTER AVERAGE TREE HEIGHT IN FEET OR METERS
(MAX. VALUE: 399.9)
>70.

ENTER AVERAGE SOIL DEPTH IN FEET OR METERS (MAX. VALUE: 12.9)
>3.

ENTER NUMBER OF SILVICULTURAL STATES IN PRESCRIPTION
(MAX. VALUE: 50)
>1

ENTER CANOPY OPENING CODE FOR PRESCRIPTION: 1=OPEN  2=NOT OPEN
>2

IS PRESCRIPTION PRECIPITATION DIFFERENT THAN MOST RECENT
PRECIPITATION DATA ENTERED (1=YES 2=NO)?
>1

ENTER FOUR SEASONAL PRECIPITATION VALUES FOR PRESCRIPTION
IN INCHES OR CENTIMETERS (MAX. VALUE: 999.9)
IF REGION HAS ONLY THREE SEASONS, ENTER ZERO FOR THE FOURTH SEASON
>8.0 11.0 7.8 0

***** WATERSHED/ANALYSIS NUMBER 1 *****
***** PRESCRIPTION NUMBER 3 *****
***** STATE NUMBER  1 *****

ENTER STATE IDENTIFICATION (MAX. 15 CHARACTERS).
>FORESTED

ENTER DOMINANT VEGETATION CODE FOR STATE:
1=LODGEPOLE PINE   2=SPRUCE-FIR
3=PONDEROSA PINE   4=WESTERN LARCH
5=HEMLOCK-SPRUCE   6=DOUGLAS FIR
7=CONIFEROUS   8=DECIDUOUS   9=MIXED
>1

ENTER COVER DENSITY (MAX. VALUE: .99)
>.18

ENTER AREA OF SILVICULTURAL STATE IN ACRES OR HECTARES
(MAX. VALUE: 9999.9)
>588
```

```
UNLESS THE USER SPECIFIES THE SNOW RETENTION COEFFICIENT,
WET ALLOWS EACH PRESCRIPTION ONLY ONE IMPACTED STATE AND
ONE FORESTED IMPACTED STATE.
ENTER COMPARTMENT CODE
1=IMPACTED   2=FORESTED IMPACTED   3=UNIMPACTED
>3

ENTER CANOPY OPENING CODE FOR STATE: 1=OPEN  2=NOT OPEN
>2

ENTER SNOW RETENTION COEFFICIENT (MAX. VALUE: 2.00)
IF UNKNOWN ENTER: -1
>1.0

AT THIS POINT, THE USER HAS TWO OPTIONS:
1.  EXECUTE WET WITH THE FILE THIS PROGRAM JUST CREATED, OR
2.  SAVE THE FILE CREATED BY THIS PROGRAM FOR EDITING
    AND/OR SUBSEQUENT INPUT INTO WET.  IF YOU CHOOSE THIS
    OPTION, ISSUE THE FOLLOWING COMMANDS PRIOR TO
    TERMINATING THIS COMPUTER SESSION:

                          @ASG,UP FILENAME.
                         @COPY 10., FILENAME.

DO YOU WANT TO EXECUTE WET NOW?  (1=YES  2=NO)
>2

THE 'CARD DECK' CREATED BY THIS PROGRAM IS IN THE TEMPORARY FILE 10.
IT SHOULD BE COPIED TO ANOTHER FILE DURING THIS COMPUTER SESSION IF YOU
WISH TO ACCESS IT AT ANOTHER TIME

PROGRAM TERMINATION
```


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